

REMARKS

Claims 1-39 are pending in the application prior to entering this amendment.

The examiner rejects claims 1-7, 13-16, 19, 24-32, and 38-39 under 35 U.S.C. 102(b) as anticipated by, or in the alternative, under 35 U.S.C. §103(a), as unpatentable over Virtual Network Computing (VNC).

The examiner rejects claims 8-9, 20-21, and 34-35 under 35 U.S.C. 103(a) as being unpatentable over VNC in view of Mairs et al. (U.S. Patent No. 5,865,711).

The examiner rejects claims 9, 21, and 35 under 35 U.S.C. 103(a) as being unpatentable over VNC in view of Mairs and in further view of Aharoni (U.S. Patent No. 6,014,694).

The examiner rejects claims 10, 22, and 36 under 35 U.S.C. 103(a) as being unpatentable over VNC in view of Mairs and in further view of Tsai et al. (U.S. Patent No. 5,818,877).

The examiner rejects claims 11, 23, and 37 under 35 U.S.C. 103(a) as being unpatentable over VNC in view of Mairs and Tsai and in further view of Gill et al. (U.S. Patent No. 6,259,810 to Gill).

The examiner rejects claims 12 and 33 under 35 U.S.C. 103(a) as being unpatentable over VNC in view of Yanagihara et al. (U.S. Patent No. 5,742,728).

The examiner rejects claims 1, 4-7, 12, 15, 18-19, and 24-33 under 35 U.S.C. 102(a) as being anticipated by Official Notice.

The applicant amends claims 1-2, 4, 6-8, 10-12, 15-6, 18-20, 22-24, 26-34, and 36-39 and cancels claims 9 and 21, without prejudice. The applicant adds new claims 40-46.

Claims 1-8, 10-20, and 22-46 remain in the case after entering this amendment.

The applicant adds no new matter and requests reconsideration.

Claim Rejections Under §§ 102 and 103

The examiner rejects claims 1-39 as old or obvious over VNC in view of various combinations of Mairs, Aharoni, Tsai, Gill, and Yanagihara.

The applicant traverses the examiner's rejections for the reasons that follow.

Claim 1 recites *where the temporal compressor is adapted to XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache.* Claim 15 recites *where the temporal compressor is adapted to*

XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache.

The examiner alleges that claims 8 and 20, which previously introduced a different XOR limitation, is obviated by the combination of VNC and Mairs. The examiner acknowledges that the VNC does not expressly disclose a spatial or temporal compressor but argues that the VNC inherently discloses the two because it discloses using MPEG encoding and it uses both compression types.

Even if the applicant acknowledges that MPEG encoding includes both spatial and temporal compression, the combination of the VNC with Mairs does not obviate claim 1. The VNC discloses Adaptive Update by where “a set of rectangles of pixel data makes a frame buffer update (or simply update). An update represents a change from one valid framebuffer state to another. In this sense, an update is similar to a frame of video. It differs, however, in that it usually affects only a small area of the framebuffer. Each rectangle may be encoded using a different scheme. The server can therefore choose the encoding most appropriate for the particular screen content being transmitted and the available network bandwidth.”

The examiner alleges that Mairs discloses that “[E]ach row of the screen data is differentially encoded with respect to the previous row.” Mairs, column 16, lines 19-22. That is, Mairs’ discloses intraframe differential encoding. Mairs’ goes on to describe its intraframe differential encoding as follows.

“To differentially encode the rows, the Share System performs an exclusive-OR logical operation on each row of the screen data. The exclusive-OR logical operation identifies which bit values are different between one row and the next row. The result of the exclusive-OR is a 1 if the values are different and is a 0 if the values are the same.”

Mairs, column 16, lines 41-47.

Nothing in Mairs discloses that *the temporal compressor is adapted to XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache* as recited in claims 1 and 15. Put differently, Mairs does not disclose any kind of temporal interframe compression as recited in the amended claims. Since Mairs does not disclose temporal compression as recited, it cannot disclose “that the method of compressing data using a temporal compressor to produce a differential output

enables the output data to a client station to be transmitted in an optimal matter" as the examiner alleges in the Office Action, page 15, lines 10-13. Thus, not only does Mairs fail to disclose the specific temporal compressor recited in claims 1 and 15, even if it did, Mairs would fail to provide a motivation for its combination with the VNC to obviate the independent claims 1 and 15. Additionally, nothing in the VNC or Mairs suggests the generation of the difference map if the portion of the user data from the previous frame is in cache. Doing so, ensures that the smallest amount of data is sent over the communication pipeline thereby improving transmission efficiency.

Claim 24 recites *determining if a portion of the user data from a current frame is stored in cache, generating a difference map by temporally compressing the spatially compressed multimedia data by XORing the portion of the user data from the current frame with a portion of the user data having a same spatial location in a previous frame responsive to the determining, and generating a difference table by run length encoding each scan line of the difference map.* As we explain above, Mairs does not disclose interframe compression much less the generation of a difference map and a difference table responsive to determining whether the user data is stored in cache.

New claims 40-41, 42-43, and 44-45 depend from independent claims 1, 15, and 24, respectively. New claims 40, 42, and 44 add the limitation that the cache is located in the client (and not in the server). New claims 41, 43, and 45 add the limitation that the server determines whether the temporally compressed data is smaller than the uncompressed data, and if so, transmits the temporally compressed data to the client to ensure that the smallest amount of data is sent over the communication pipeline 24. Neither the VNC, Mairs, nor any combination discloses either of these limitations, particularly when combined with the other elements and limitations recited in the associated independent claims.

New claim 46 recites *a data server, distinct from the client station, coupled to the server through a second communication link, the server and the data server communicating by using a communication protocol other than the remote desktop communication protocol used by the server and the client station.*

The VNC fails to disclose the cited element. FIG. 1 of VNC shows a VNC server coupled to a VNC viewer (client) via a VNC protocol. But a data server, as recited in claims 1 and 15, is absent.

The examiner notes, in the rejection of claim 3 that includes similar limitations to new claim 46, that VNC protocol will operate over any reliable transport such as TCP/TP. Even though the VNC teaches that the protocol may have more than one type of transport, it fails to

teach the existence of two different protocols operating in the same network using distinct communication links coupled to a data server that is distinct from the client station.

The applicant believes the amendments it made to the independent claims 1, 15, and 24 overcome any combination of the VNC, Mairs, and any other reference cited. The applicant has amended many of the dependent claims to correct typographical and stylistic errors. The applicant further believes new claims 40-46 are new and not obvious over the VNC, Mairs, and any other reference cited.

Official Notice

The examiner rejects claims 1, 4-7, 12, 15, 18-19, and 24-33 as old by Official Notice.

The applicant traverses the Official Notice, and challenges its factual assertion as not properly noticed and not properly based on common knowledge as required by MPEP § 2144.03.

The examiner takes Official Notice that a “streaming media” system was well known in the art at the time the invention was made, and that a “steaming media” system contains all the elements of these claims. The applicant, however, asserts that instant and unquestionable demonstration that the art of “streaming media” anticipates each and every element of the claims has not, and cannot, be made. Because of this, the official notice is improper under MPEP § 2144.03. Additionally, official notice should only be taken by the examiner on facts beyond the record that are “capable of such instant and unquestionable demonstration as to defy dispute” (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 U.S.P.Q. 6 (CCPA 1961)). Also, facts so noticed should be of notorious character and serve only to “fill in the gaps” which might exist in the evidentiary showing made by the examiner to support a particular ground of rejection. *In re Zurko*, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001); *Ahlert*, 424 F.2d at 1092, 165 USPQ at 421 (MPEP § 2144.03). Instead, the examiner has taken official notice on an entire independent claims and not just notorious facts to “fill in the gaps.” The independent claims, particularly as amended, include many new and non-obvious elements and limitations.

Claim 1 now recites, among other limitations, *where the temporal compressor is adapted to XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache.*

Claim 15 now recites, among other limitations, *where the temporal compressor is adapted to XOR a portion of the user data from a current frame with a portion of the user*

data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache.

Claim 24 now recites, among other limitations, *determining if a portion of the user data from a current frame is stored in cache, generating a difference map by temporally compressing the spatially compressed multimedia data by XORing the portion of the user data from the current frame with a portion of the user data having a same spatial location in a previous frame responsive to the determining, and generating a difference table by run length encoding each scan line of the difference map.* Claims 4, 5, 7, and 12 depend from claim 1 and inherently include all of the limitations of the base claim. As discussed above, the examiner's official notice is not proper for the base claim much less the further embodiments of the dependent claims.

Claims 18 and 19 depend from claim 15 and inherently include all of the limitations of the base claim. As discussed above, the examiner's official notice is not proper for the base claim much less the further embodiments of the dependent claims.

Claims 25-33 depend from claim 24 and inherently include all of the limitations of the base claim. As discussed above, the examiner's official notice is not proper for the base claim much less the further embodiments of the dependent claims.

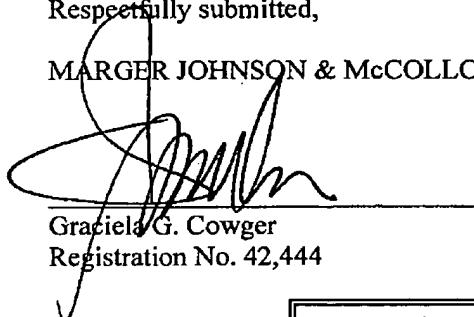
Conclusion

For the foregoing reasons, the applicant requests reconsideration and allowance of all pending claims. The applicant encourages the examiner to telephone at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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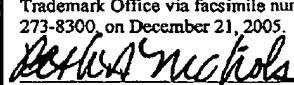
Respectfully submitted,

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I hereby certify that this correspondence is
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AMENDMENT

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